

**KODIAK MINING COMPANY, LLC  
COKE MINE NO. 1, P-3887, R-6**

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ALABAMA SURFACE MINING COMMISSION

SURFACE MINING PERMIT APPLICATION

**P A R T   I I I**

Prepared by:

**MCGEHEE ENGINEERING CORP.**

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**PART III - OPERATION PLAN**

**A. General Operation Information**

1. Describe the type and method of coal mining procedures and major equipment to be used. (780.11)

See Attachment III-A-1

Backhoes	Service Trucks	Off Road Haulers
Bulk Anfo Trucks	Dozers	Track Backhoes
Loaders	Drills	Continuous Miners
Roof Bolting Machines	Coal Cutting Machines	Compactors
Coal Scoops	Radial Sacker(s)	Rotary Screen(s)
Wet Screens	Heavy Media	Separators
Cyclones	Centrifuges	Conveyors
Pumps	Fans	Scrapers

2. Describe the sequence and timing of increments to be mined (as shown on permit map) over the total life of the permit. (780.11)

See attached [Permit Map](#)

The timing increments are as follows:

<u>Increment No.</u>	<u>Acres</u>	<u>Dates</u>	
		<b>From</b>	<b>To</b>
1	159.0	R-5 Effective Date	12 Months After
2	59.0	R-5 Effective Date	12 Months After
3	424.0	When Needed	12 Months After
4	28.0	When Needed	12 Months After
5	40.0	When Needed	12 Months After

\* The Effective Date depends on the date of issuance of permit.

## **OPERATION PLAN**

Revision R-6 proposes to add a new underground mine in the Atkins coal seam, Atkins Underground Mine. The surface area proposed for the mine is currently permitted. No additional area is added to this permit. The room and pillar method of underground mining will be used at the Atkins Underground Mine. Mining will begin by facing up an abandoned highwall created by surface mining in the 1980's. Material excavated from the face up (approximately 250,000 CY) will be used to level the area around the mine entries to better accommodate the area for equipment storage, parts storage, portable buildings, etc. The mine entries faceup are located in the SW  $\frac{1}{4}$  of the SE  $\frac{1}{4}$  of Section 20; NW  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  of Section 29, all in Township 21 South, Range 4 West, as shown on the [Permit Map](#). The face-up area (approximately 5 acres) will remain disturbed as long as the mine operates. See attached [Atkins Face-up Cross-Sections](#).

After the face up is completed, mining operations will advance in a south easterly direction using a 5 entry mining system for advancement to the southeast as shown on the Projections and Timing Maps located in the Subsidence Control Plan. As fresh air is supplied continuously across the working faces, a combination of mining, roof bolting and timbering will be used to extract the coal safely. The current mine plan initially proposes rooms and entries on many different layouts. Combinations of cross cut centers will range from 70 foot centers to 70 by 80, 80 by 90, 80 by 100 and 90 by 100 feet. The determination will be based on the overburden depth at each location to provide adequate support. No pillar recovery is planned therefore these permanent pillars will be used to control subsidence. See the Atkins Underground Mine Pre-Subsidence Control plan attached in [Part III-H](#) for the proposed projections of the areas to be mined.

Coal will be transported to the outside during the initial re-habilitation phases using shuttle cars until a belt line is installed to transport the coal to the outside. A ventilation fan will be installed in one entry to provide fresh air to the working faces. The run of mine coal will be belted to the existing prep plant coal stockpile to be processed.

3. Attach a narrative explaining the construction modification, use, maintenance, and removal of the following facilities: (780.11)

(a) Coal removal, handling, storage, cleaning and transportation structures and facilities;

See [Attachment III-A-3](#),

(b) Spoil, coal mine waste and non-coal mine waste removal, handling, storage, transportation and disposal structures and facilities;

See Attachment III-A-3 and original permit.

(c) Mine facilities; and

See Attachment III-A-3 and original permit.

5. Describe measures to be taken to ensure that all debris, acid-forming and toxic-forming materials and materials constituting a fire hazard are disposed of in accordance with 816.89 and 816.103; include contingency plans to prevent sustained combustion of such material. (780.18).

At this mine site, if acid or toxic forming material is encountered, it will be buried in the final pit or face up area, a minimum of ten (10') feet away from the highwall, a minimum of ten (10') feet up from the pit floor, and a minimum of fifty (50') feet away from a major drain. This acid or toxic forming material will be covered with a minimum of four (4') feet of the best available non-acid, non-toxic and non-combustible forming material.

For areas such as coal stockpiles, the following measures will be performed: After all coal is removed and the coal stockpile is no longer needed the base material will be removed and placed in the final pit or face up area, a minimum of ten (10') feet away from the highwall, a minimum of ten (10') feet up from the pit floor, and a minimum of fifty (50') feet away from a major drain. This acid or toxic forming material will be covered with a minimum of four (4') feet of the best available non-acid, non-toxic and non-combustible forming material.

Any material such as oil, grease, rags etc. that may present a fire hazard will be properly disposed of in an approved landfill.

Any non-coal waste will be disposed of at approved off-site landfills which meet all applicable local, state and federal requirements.

## COAL REMOVAL, HANDLING, STORAGE, CLEANING AND TRANSPORTATION AND FACILITIES

Coal will be mined using continuous miners and shuttle cars then transported onto a conveyor belt line to the outside and a raw coal stockpile. Coal will then loaded onto the proposed conveyor beltline and transported to the preparation plant for processing. After coal the coal is processed it will be either loaded on trucks or railroad cars for shipment.

Areas for coal stockpiles will be carefully selected as to minimize contamination of the surface and groundwater in the area. Coal stockpiles will be constructed on hilltops or ridgetops to prevent any unnecessary surface drainage from entering the stockpile area. When it is not possible to place the coal stockpiles on high ground, diversions will be constructed around the coal stockpile in manner as to divert all offsite drainage away from the coal stockpile. Diversions will be constructed as outlined in Part III-B-3 of this application. Prior to the construction of the coal stockpile, the area will be cleared and grubbed of all organic material, removing and protecting all topsoil in accordance with Rules 880-X-10D-.07 thru 880-X-10D-.11, if necessary. The coal stockpile subgrade will be graded in such a manner as to shaped the stockpile area to a slope (1% - 3%) to provide adequate drainage and minimize infiltration. Upon completion of the subgrade, a relatively impervious pad will be constructed using a clay material (with a permeability coefficient of  $1 \times 10^{-6}$  cm/sec or less) placed in six (6") inch lifts and compacted to ninety-five (95%) percent of the standard proctor density, a minimum of two (2') feet in thickness above the subgrade. Upon completion of the impervious clay pad, a pad will be constructed made of compacted coal of desired thickness to carry the weight of loading and transportation equipment. All surface runoff from the coal stockpile will routed through an approved sediment basin prior to leaving the permit area where chemical treatment may be added as necessary to meet all State and Federal water quality limits. Prior to entering the sediment basin the runoff from the coal stockpiles will be routed through BMP's such as [silt fences](#), [hay bales](#), [rock dams](#), or [sumps](#). The coal stockpiles and diversions needed for coal stockpiles will be maintained until removal. The coal stockpiles and diversions needed for coal stockpiles will be maintained until removal.

After all coal is removed and the coal stockpile is no longer needed the base material will be removed and buried in the final pit or face up area. It will be buried a minimum of fifty (50') feet away from a major drain. This acid or toxic forming material will be covered with a minimum of four (4') feet of the best available non-acid, non-toxic and non-combustible forming material. This will keep the material above the normal groundwater level at this site.

Any material such as oil, grease, rags etc. that may present a fire hazard will be properly disposed of in an approved landfill. Any non-coal waste will be disposed of at approved off-site landfills, which meet all applicable local, state and federal requirements.

All transportation facilities such as haul roads, access roads, railroads, etc. will be constructed to meet minimum design criteria including but not limited to the following: Existing roads in adequate condition will be used if possible to eliminate additional disturbance. New roads will be located on ridges or the most suitable slopes available for stability. The minimum width necessary for the proposed roads will be cleared, grubbed and all topsoil removed (if required) and stockpiled for protection. Roadbeds will be constructed by compacting desirable backfill

material in lifts to form an adequate sub-grade. The road bed will then be capped with a minimum of four (4) inches of compacted base material such as gravel, crushed stone, rock, chert or other suitable material (as approved by the Regulatory Authority) sufficient for its intended use. Routine maintenance such as resurfacing may be required in the course of mining to keep the roads in adequate condition. All roads and railroads, existing or created for use in this mining operation, will have adequate sediment control facilities, such as silt fences, hay bale berms, and/or excavated sediment trap sumps constructed where deemed necessary to effectively catch and control sediment from these disturbed areas. All materials used in the construction of the transportation facilities will be non-toxic and non-combustible. Where needed, drainage control structures will be placed below the sub-grade, using prudent engineering practices to design and construct said structures. Drainage control for the transportation facilities will be accomplished by the use of drainpipes, ditches, cross drains and ditch relief drains. No sustained grades of ten (10%) percent will be constructed unless unavoidable, at which time sediment control facilities such as silt fences, hay dams and/or rock check dams will be installed at strategic locations to prevent erosion and insure stability. Grades greater than fifteen (15%) percent will require ditch relief drains, cross over drains and road drainways at a minimum of three (350') hundred fifty feet apart. All disturbed areas adjacent to the newly constructed road will be revegetated in accordance with the approved Reclamation Plan (Part IV-C-5) immediately following construction. Routine vegetative maintenance will be administered when necessary to maintain a vegetative cover. Maintenance of drainage control facilities including cleaning of road ditches, removal of sediment from structures and minor repairs may be required periodically. When roads are not to be left permanently, at landowners request, roads will be removed in the following manner: the base material will be hauled offsite and disposed of in an appropriate manner, with the sub-grade and drainage control ditches being plowed up and regraded to the approximate original contour. The original drainage courses will be re-established by regrading and reshaping to blend with the surrounding area. To prevent erosion and provide long term stability, terraces, cross drains, berms, etc. will be constructed, where deemed necessary. Sediment control measures for all disturbed areas created or existing in the construction or use of proposed or existing haulroads will include but not be limited to the construction or installation of hay dams, silt fences, rock check dams, etc. and will be constructed or installed in strategic locations as deemed necessary on site. These sediment control facilities will be constructed or installed promptly following the construction of said haulroads, access roads, etc. All disturbed areas will be revegetated in accordance with the approved Reclamation Plan (IV-C-5).

Routine inspections and maintenance (such as regrading, resurfacing, maintenance of sediment control structures, spot replanting, and dust control) will be conducted regularly during the life of each road to ensure that each road continually meets design and performance standards. Dust control will be achieved by the periodic application of water, chemical binders and/or other dust suppressants. Any road damaged by a catastrophic event, such as a flood, or earthquake, will be repaired as soon as is practicable after the damage has occurred.

See Part III-B-5 for the primary and ancillary road layout, design, construction, maintenance requirements and specifications.

**SPOIL, COAL MINE WASTE AND NON-COAL MINE  
WASTE REMOVAL, HANDLING, STORAGE, TRANSPORTATION  
AND DISPOSAL STRUCTURES AND FACILITIES**

**Spoil**

All spoil excavated within the abandoned Akins seam surface mine pit will be used to level the area around the mine entries to better accommodate the area for equipment storage, parts storage, portable buildings, etc. Once the backfilling and grading is complete all areas will be vegetated and mulched to prevent erosion. The small face-up area within the Atkin Pit for the underground mine will remain disturbed as long as the mine operates.

**MINE FACILITIES**

Additional mine facilities proposed for the addition of the Atkins Underground Mine will consist of additional conveyors from the mine "pit mouth" to the coal stockpile area. Additional mine fans, offices, bathhouses as necessary will be constructed. Most buildings will be portable and can be moved or relocated as necessary. Storage areas within the faceup site will be used to store materials to be used as part of the underground mine activities.

6. Give a description, including appropriate cross-sections and maps, of measures to be used to seal or manage mine openings, bore holes, wells and other openings within the proposed permit area. (780.18, 816.13-816.15)

Mine openings within the permit area (other than blast holes) will be eliminated in the following methods:

- 1) Mine Openings – Old works (abandoned underground mines) will be eliminated by the following process: Prior to the backfilling or shooting of the final highwall all mine openings will be sealed with a clay material having a permeability ranging between 0.00001 and 0.000001 cm/sec. This clay material will be compacted in six (6) inch lifts to ninety-five (95%) percent of the standard proctor density, a minimum of five (5) feet above the top of the opening.

[SEE ATTACHMENT III-A-6-3](#)

Final Sealing of Mine Opening Created by this Permit - After mining is complete at this mining operation, mine openings created by mining operation will be sealed in accordance with the requirements of the Mine Safety and Health Administration as follows:

Wet Opening Seals – A sufficient number of 6 inch diameter pipes will be inserted into the mine opening and covered with approximately 12 inches of soil material along the outside of the opening. The covering of the pipes is necessary to prevent crushing of the pipes by equipment during the sealing operations. A 12-inch thick reinforced concrete block wall or a carpenter formed, reinforced concrete wall will be constructed within the opening. If the wall is constructed of 12 inch block, concrete will be used as filler in each cell of the block and around the perimeter of the wall. This is done in an effort to ensure a water tight seal of the wall. Upon the completion of construction of the wall, earthen material will be used to backfill the opening to a minimum of 5 feet above the top of the opening. All backfill material will be an impervious, noncombustible, clay material compacted to provide an impervious seal. This clay wedge will be sloped to a slope no steeper than 2 horizontal to 1 vertical.

Upon the completion of the initial backfilling operation, the pipes will be permanently plugged to prevent seepage. The remaining face-up highwall will be backfilled and eliminated at this point. All disturbed areas will be fertilized, seeded and mulched in accordance with the approved reclamation plan of this permit application.

Dry Opening Seals - If the mine openings have been observed and documented as being dry, the exact same sealing procedures will be followed as outlined above with the omission of the 6 inch drain pipes.

[SEE ATTACHMENT III-A-6-3\(a\)](#)

**B. Engineering Plans.**

All cross sections, maps and plans related to operations, reclamation and structures must comply with Section 780.10. Plans, appropriate calculation and conclusions shall be presented in a clear and logical sequence and shall take into account all applicable factors necessary to evaluate the proposed plan or design.

1. Existing Structures. (780.12, 786.21)

- (a) Describe each existing structure to be used, its location, current condition, approximate dates of construction and evidence (including relevant monitoring data) showing whether or not the structure meets the performance standards of Subchapter K or Subchapter B, whichever is more stringent and demonstrate whether or not the use of existing structures will pose a significant harm to the environment or public health or safety.

Not Applicable

- (b) If an existing structure requires modification or reconstruction to meet the performance standards, attach a compliance plan which includes design specifications, construction schedule, monitoring procedures, and evidence that the risk of harm to the environment or public health or safety is not significant during modification or reconstruction.

See Attachment III-B-2(a).

2. Ponds, impoundments, banks, dams and embankments. (780.25)

- (a) Submit a general plan which complies with Section 780.25 (a)(1) for each proposed sedimentation pond, water impoundment, and coal processing waste bank, dam or embankment to be located within the proposed permit area.

See Attachment III-B-2(a).

- (b) Submit detailed design plans which comply with Sections 780.25(a)(2)(3) and 816.46, for each sedimentation pond to be constructed on the increment you currently propose to mine. If the sediment pond is to remain as a permanent water impoundment, design plans shall also comply with Section 816.49.

See Attachment III-B-2(a).

- (c) Submit detailed design plans which comply with Sections 780.25(a) (2&3) and 816.49, for each temporary or permanent water impoundment to be constructed on the increment you currently propose to mine.

See Attachment III-B-2(a).

- (d) Submit detailed design plans, which comply with Section 780.25(a) (2&3) and 816.81-816.85, for coal mine waste bank to be constructed on the increment you currently propose to mine.

See Attachment III-B-2(a)

- (e) Submit detailed plans which comply with Sections 780.25 (a)(2&3) and 816.91-816.93 for each coal mine waste dam and embankment to be constructed on the increment which you currently propose to mine.

None Proposed

**GENERAL ENGINEERING PLAN CERTIFICATION STATEMENT**

I, Bradley K. Simmons, a registered professional engineer, hereby certify that the information, cross-sections, data, maps, etc., contained in this general plan in Attachment III-B-2-A is true and correct to the best of my knowledge and belief.

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**McGehee Engineering Corp.**  
Bradley K. Simmons, P.E.  
Alabama Reg. No. 33277

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Date

**ADDENDUM TO THE GENERAL PLAN**

No additional area is being added to the permit for the addition of the Akins Underground Mine. Runoff from all area proposed to be disturbed by this revision is controlled by Sediment Basins 018 or 022. The small face-up area (approximately 5 acres) within the Atkin Pit for the underground mine will remain disturbed as long as the mine operates. Material excavated from the face up (approximately 250,000 CY) will be used to level the area around the mine entries to better accommodate the area for equipment storage, parts storage, portable buildings, etc. The watershed boundaries for each sediment basin have not changed due to this revision.

This addendum also addresses the deletion of portions of Coarse Refuse Disposal Area No. 3 from the permit. This facility was never designed or constructed.

Sediment Basin 018 and 022 are permitted under P-3887, P-3978, and P-3663.

Sediment Basin 022 was re-evaluated under Jesse Creek Mining, LLC - Gurnee Mine P-3978. This re-evaluation analyzed the basin with considerably more disturbance than what is proposed for Revision No. 6. No modification is required.

Sediment Basin 018 was re-evaluated under Revision R-5. This re-evaluation analyzed the basin with considerably more disturbance than what is proposed for Revision R-6. No modification is required.